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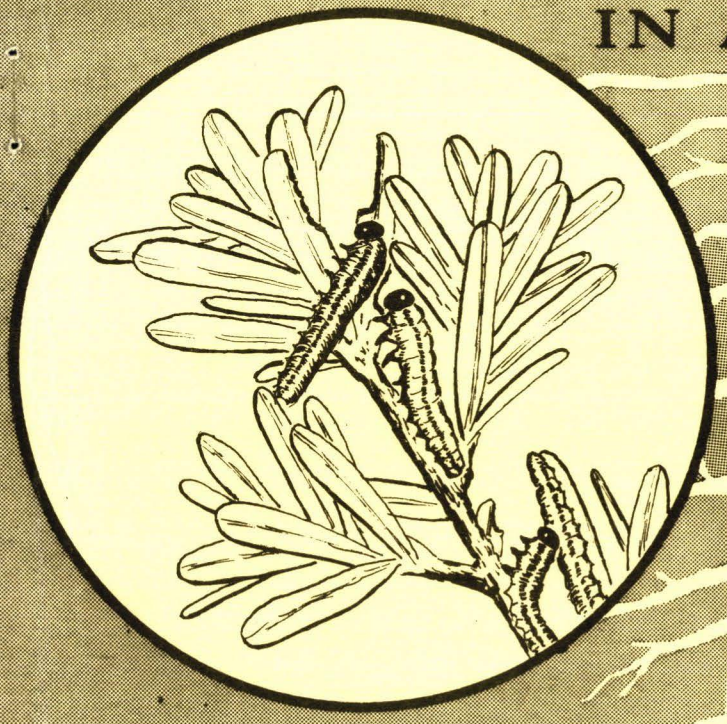
Forest Insect & Disease Conditions

IN ALASKA DURING 1968



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DECEMBER 1968

DIVISION OF TIMBER MANAGEMENT

FOREST INSECT CONDITIONS

IN ALASKA DURING 1968

by

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U.S. Department of Agriculture
Juneau, Alaska

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EXPERIMENT STATION

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CONDITIONS IN BRIEF

The outbreak status of two forest insects continued to cause concern in Alaska. The spruce beetle remained at epidemic levels on the Kenai National Moose Range and on portions of the adjacent Chugach National Forest on the Kenai Peninsula. A new infestation occurred on the Salmon River in southeastern Alaska near Hyder. Two old infestations located in the Caribou Creek and the Tonsina River drainages of southcentral Alaska became active again. A combination trap-tree and direct control project was undertaken on a portion of a 1,200 acre infestation on the Chugach National Forest. Salvage logging is being employed to control the outbreak near Hyder. Additional trap-tree and salvage logging will be used to control beetle populations on portions of the Chugach National Forest in 1969.

The large aspen tortrix was active over much of interior Alaska and caused severe defoliation in the Fairbanks and Glennallen areas. A decrease in this epidemic is expected in 1969. A sharp decline in hemlock sawfly defoliation was observed throughout southeastern Alaska. Egg and pupal counts indicate that a significant decrease in sawfly numbers had occurred in all areas sampled. An extremely high incidence of pupal parasitism was observed in one area near Sitka. Samples of diseased cocoons taken from widely scattered areas in the panhandle contained the resting spores of an Entomophthorales fungus. Black-headed budworm populations remained very low for the fourth season. Egg surveys revealed active populations at only two locations in southeast Alaska. Indications are that this pest will remain endemic again in 1969. No projects were undertaken to control defoliating insects during the past year.

STATUS OF INSECTS

Sitka spruce beetle, Dendroctonus obesus (Mann.)--The Sitka spruce beetle has continued to be the most serious insect enemy of white and Sitka spruce in Alaska. A several thousand acre infestation, centered in the Chickaloon Bay-Pt. Possession and Kenai-Soldotna areas, continued to cause epidemic losses of white spruce on the Kenai National Moose Range in southcentral Alaska. This infestation, triggered by road building, pipeline construction, and general land clearing for petroleum exploration, has persisted for several years and is expected to continue in 1969. No control is being considered at this time.

Areas of chronic infestation were observed at various locations on the Kenai and Anchorage Ranger Districts of the Chugach National Forest, but no new outbreaks were recorded. A 400 acre "hot spot," within a 1,200 acre infestation in the Granite Creek-East Fork drainage of the Anchorage Ranger District, was treated in 1968. Treatment included the use of both trap-tree and chemical control methods. Increased tree killing occurring within the untreated portions of this general infestation in 1968, indicate a need for additional control. Planned treatment for 1969 includes trap-tree placement, direct control with chemicals, and salvage logging. Two old infestations became active again in interior spruce stands. Tree killing was observed in a 200 acre area along Caribou Creek, Mile 108 of the Glenn Highway. This infestation, apparently a result of general flooding, is expected to continue in 1969. Increased tree killing in scattered, over-mature white spruce was observed along the east side of the Tonsina River in the vicinity of Stuart Creek. These infestations will be kept under periodic survelliance. No control is recommended.

Extensive killing of river bottom Sitka spruce has been caused by the spruce beetle along a five mile stretch of the Salmon River at the head of Portland Canal. Violent flooding from the dumping of glacier fed Disappearing Lake deposited much sand and gravel over tree roots on bottom land, and outbreak populations of bark beetles developed in the weakened trees. Salvage logging has been employed to control this outbreak.

Large aspen tortrix, Choristoneura conflictana (Wlkr.).--Populations of this pest were common throughout the interior of Alaska for the third consecutive season. Stands of quaking aspen and, to some extent, balsam poplar and alder from Chatanika south to Chickaloon on the Glenn Highway and east to Chicken north of Tetlin Junction on the Alaska Highway, sustained varying degrees of defoliation. Especially heavy defoliation, resulting in the total destruction of foliage complement, occurred for the second year over many hundreds of acres in both the Fairbanks and the Copper Center-Glennallen areas. Wide spread starvation of four-fifth instar larvae and an increase in parasitism in these areas indicate that a significant reduction in population is occurring. A decrease in both the extent and intensity of defoliation is expected to occur within the general infestation in 1969. Except for possible treatment of a few valuable recreation areas, no control is contemplated.

Hemlock sawfly, Neodiprion tsuage Midd.--A sharp decline in sawfly populations was observed in most infestation centers sampled on both the North and South Tongass National Forests in 1969. The persistant infestation on Peril Strait in the vicinity of Todd completely collapsed, leaving in its wake appreciable top-killing and tree mortality. A study will be made in 1969 to determine the impact of the prolonged defoliation on the stands in this area. A potentially serious infestation on State and private lands in the vicinity of Sitka did not materialize. Apparently, reduced fecundity brought on by starvation, coupled with unusually high pupal parasitism brought about the decline.

Areas of medium to heavy defoliation observed on the west and northwest side of Kupreanof Island and adjacent Kuiu Island, the northern and west central portions of Prince of Wales Island and adjacent Kosciusko Island in 1966-67 have mostly subsided. Egg and pupal samples taken during a fall survey indicate that these populations are declining and should cause no damage in 1969. Analysis of samples of sawfly cocoons sent to the Forestry Sciences Laboratory at Corvallis, Oregon, revealed the presence of resting spores of an Entomophthorales fungus. It is assumed that this pathogen played an important role in causing the decline of sawfly populations in these areas.

The noticeable, but very light defoliation, observed on Tuxekan Island, at a few widely scattered locations on Prince of Wales Island, on several small islands in Trocadero Bay and at Coco Harbor on Dall Island is expected to remain at its present level in 1969. Significant damage to host trees is not expected next year.

Black-headed budworm, Acleris variana (Fern.).--Budworm populations in southeast Alaska remained low for the fourth season. Results of egg surveys revealed populations at only two sample areas. Egg counts taken at Tuxekan village on the west side of Prince of Wales Island and on nearby Tuxekan Island indicate that these populations will remain endemic. No damage is expected to result from the feeding of this insect in 1969.

Western hemlock looper, Lambdina fiscellaria lugubrosa (Hulst.).--The western hemlock looper epidemic reported in the Bradfield River drainage in 1965 appears to have completely subsided.

Cedar bark beetle, Phloeosinus squamosus Blkm.--Tree killing by this insect, common throughout the range of western red and Alaska yellow cedar, was especially concentrated on the South Tongass National Forest. Localized infestations, totaling several thousand acres, were observed from Frederick Sound south to the Boca de Quadra. Tree killing is expected to continue in 1969.

Unknown budminer.-- A budminer tentatively identified as a species of Zeiraphera was present in noticeable numbers on white spruce stands over a sizeable acreage on the Kenai Penninsula. Heavy damage was observed on sapling and pole-size trees from Divide to Bear Lake on the Grouse Creek drainage near Seward, Alaska. Light damage was observed on mature white spruce in the Granite Creek drainage on the Anchorage Ranger District. A continuation of this infestation is expected in 1969.

DISEASE

Western Dwarfmistletoe, Arceuthobium campylopodum f. tsugensis--Dwarfmistletoe control, consisting of cutting residual trees in clearcuts where the original overstory had been infested, was completed on 1,893 acres of the Petersburg Ranger District, North Tongass National Forest in F.Y. 1968. This work was done with contract labor at an average cost of $15.86 per acre.

The first organized distribution and extent survey of dwarfmistletoe infection on the Petersburg District will begin this year. A scouting survey will become a regular part of the cruising procedure on planned sales. A total of 3,500 acres will be surveyed at an estimated cost of $0.50 per acre in F.Y. 1969. Information from this survey will be used to improve the planning and programming of future control work on the North Tongass.

Needle cast, Hypodermella spp.--Needle browning and die-back of newly formed shoots on western hemlock has been observed over several hundred acres of old clearcuts in the Thomas Bay area of the Petersburg Ranger District. The causative agent has been identified as a needle cast of the family Hypodermataceae. No control is recommended at present time.